UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.   : 7,474,648 B2
APPLICATION NO.   : 10/679439
DATED   : January 6, 2009
INVENTOR(S)   : Jonsson et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Figure 4c is missing in the Issued Patent, and should be added as shown on attached page.

In Column 1, Lines 41-51, delete "different times. ......(ISI)." and insert the same at Line 39, after "receiver at" as a continuation of the paragraph.

In Column 11, Line 13, delete "(step 427)." and insert -- 437 --, therefor.

Delete the title page and substitute therefore the attached title page showing the corrected number of drawing sheets in patent.

Note. This certificate supersedes Certificate of Correction issued June 15, 2010.

(12) United States Patent
Jonsson et al.

(10) Patent No.: **US 7,474,648 B2**
(45) Date of Patent: **Jan. 6, 2009**

(54) **FILTERING MULTIPATH PROPAGATION DELAY VALUES FOR USE IN A MOBILE COMMUNICATIONS SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 763 days.

(21) Appl. No.: **10/679,439**

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(51) **Int. Cl.**
H04B 7/216 (2006.01)

(52) **U.S. Cl.** 370/342; 370/350; 455/67.16

(58) **Field of Classification Search** 370/350, 370/328, 335, 342; 455/434, 502, 67.16
See application file for complete search history.

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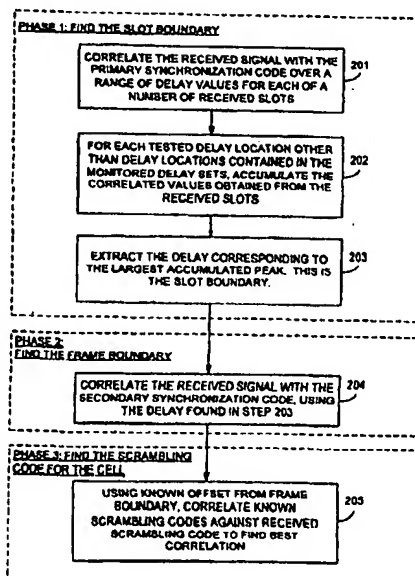
* cited by examiner

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(57) **ABSTRACT**

A time slot boundary of an unknown cell in a telecommunications system is identified by correlating a received signal with a known code over a range of delay values for each of one or more time slots, wherein the known code is used by all cells in the telecommunications system. Only for each of the delay values that are not associated with a known cell, correlation values obtained at each of the one or more time slots are accumulated. The time slot boundary is identified by determining which of the delay values is associated with a highest accumulated correlation value. One or more stored monitored delay sets may be used to determine which delay values are not associated with a known cell. The one or more stored monitored delay sets may be filtered using delay information obtained over a period of time.
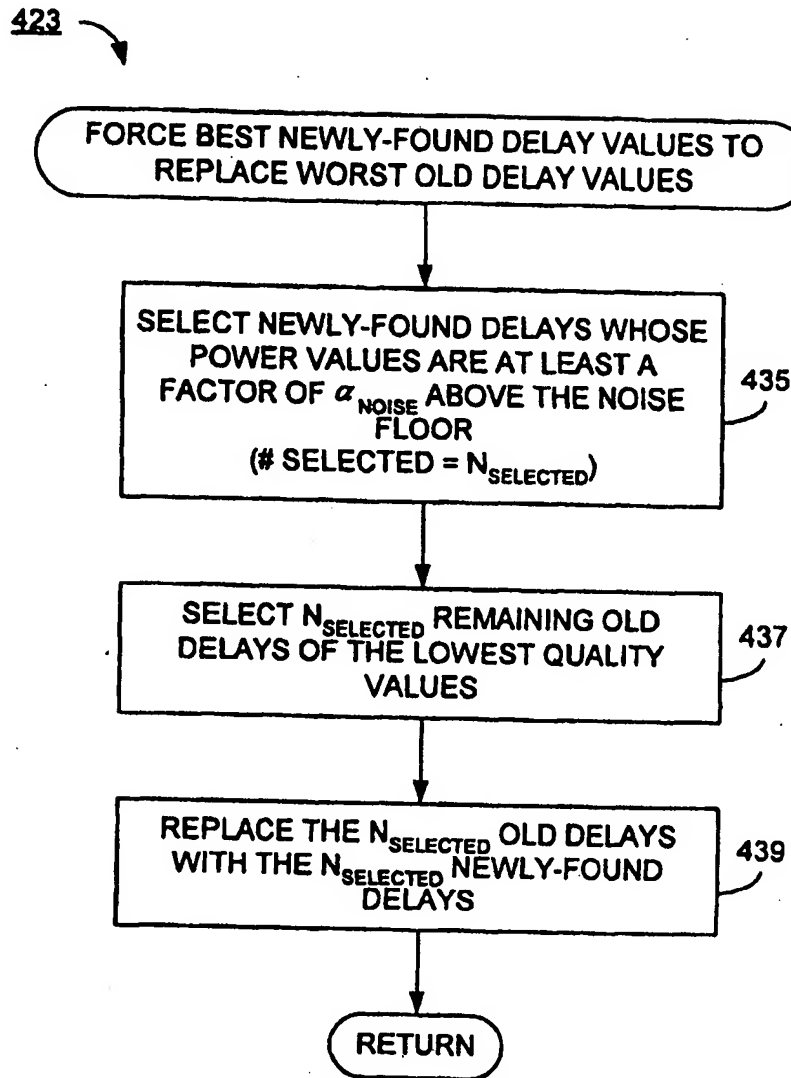
54 Claims, 6 Drawing Sheets

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FORCE BEST NEWLY-FOUND DELAY VALUES TO
REPLACE WORST OLD DELAY VALUES

SELECT NEWLY-FOUND DELAYS WHOSE
POWER VALUES ARE AT LEAST A
FACTOR OF α_{NOISE} ABOVE THE NOISE
FLOOR
(# SELECTED = $N_{SELECTED}$)   435

SELECT $N_{SELECTED}$ REMAINING OLD
DELAYS OF THE LOWEST QUALITY
VALUES   437

REPLACE THE $N_{SELECTED}$ OLD DELAYS
WITH THE $N_{SELECTED}$ NEWLY-FOUND
DELAYS   439

RETURN

FIG. 4C